

What is claimed is:

1 1. A cathode structure comprising:
2 a heater including a columnar electric insulating material
3 body and a heating wire that is partially buried in the electric
4 insulating material body; and
5 a cathode unit disposed at a first end surface of the
6 electric insulating material body, wherein
7 the heating wire leads out from a second end surface of
8 the electric insulating material body.

1 2. A cathode structure according to Claim 1, wherein
2 the electric insulating material body includes a wall
3 disposed on the second end surface so as to surround a position
4 from which the heating wire leads out.

1 3. A cathode structure according to Claim 2, wherein
2 the wall is disposed around a perimeter of the second end
3 surface,
4 the second end surface surrounded by the wall rises in
5 a dome shape, and
6 the heating wire leads out from a position between the
7 wall and a center of the second end surface.

1 4. A cathode structure according to Claim 1, wherein
2 the electric insulating material body is in a circular
3 columnar shape, and includes a part that has a greater diameter
4 than that of the second end surface.

1 5. A cathode structure comprising:
2 a heater including a columnar electric insulating material
3 body and a heating wire that is partially buried in the electric
4 insulating material body and leads out from a side surface
5 thereof; and
6 a cathode unit disposed at one of end surfaces of the
7 electric insulating material body, and emitting electrons from
8 a surface of the cathode unit when heated by the heater, wherein
9 the electric insulating material body includes a
10 protrusion disposed on the side surface between a position from
11 which the heating wire leads out and the surface of the cathode
12 unit from which electrons are emitted.

1 6. An electron gun including a cathode structure according
2 to Claim 1.

1 7. A cathode ray tube including an electron gun according
2 to Claim 6.

1 8. An electron gun including a cathode structure according
2 to Claim 5.

1 9. A cathode ray tube including an electron gun according
2 to Claim 8.